

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to sheet 1. This sheet, which includes Figure(s) 1-3, replaces the original sheet 1 including Figure(s) 1-3. In Figure 1, previously misplaced element 124 has been moved to point to the portion of the bore between "122" and "126" on the right hand side of the housing as suggested by the Examiner and is consistent with the words of the specification at paragraph [019].

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes

## **REMARKS**

The Applicants would like to express appreciation to the Examiner for his close attention to detail and helpful suggestions in the outstanding office action. The Applicants would also like to express appreciation to the Examiner for the indication of allowable subject matter contained in claims 17-24.

The present Amendment is in response to the Examiner's Office Action mailed March 18, 2005. Claim 12 is cancelled and claims 1, 5, 6, 7, 16, 17, and 21 are amended. Claims 1-11 and 13-28 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

### **I. Amended Drawings**

The Examiner objects to Figure 1 on the grounds that the reference "124" is misplaced. Applicants agree with the Examiner and submit new Figure 1, which includes a reference number "124" pointing to the portion of the bore between "122" and "126" on the right-hand side of the housing. Also enclosed is a redlined copy of Figure 1 showing the change being made.

### **II. Claims Objections**

The Examiner objects to claim 12. By this response, claim 12 has been canceled and therefore the objection to claim 12 is moot.

The Examiner objects to claim 16 because it ends with a semicolon (;). Claims 16 has been amended to end with a period rather than a semicolon. Therefore, the Applicants respectfully request that the Examiner withdraw the objection to claim 16.

The Examiner objected to claims 17, 21, and 28 because their respective preambles refer to "said step for inserting", but base claim 16 refers to two distinct steps for inserting. Claims 17, 21, and 28 have been amended by this response to clarify which step for inserting from claim 16 is being further limited. The Applicants respectfully request that the Examiner withdraw the objection to claims 17, 21, and 28.

The Examiner objected to claims 17-28 due to their dependence on claim 16. As discussed above, claim 16 has been amended and the Applicants respectfully request that the objection to claims 17-28 be withdrawn.

### **III. Prior Art Rejections**

#### **A. Rejection Under 35 U.S.C. §102**

The Examiner rejects claims 1-7, 11-16, 25 and 28 under 35 U.S.C. §102(e) as being anticipated by *Wisecarver* (United States Patent Application Number 2004/037,509). Because *Wisecarver* does not teach or suggest each and every element of the rejected claims as currently presented, Applicants respectfully traverse this rejection in view of the following remarks.

*Wisecarver* teaches an optical interconnection sub-assembly 100 that includes a housing 130 having a longitudinal bore 140 formed there-through. *See* [13-18] and Figure 1. *Wisecarver* teaches a tapered ring 170 secured to a first end of the longitudinal bore. *Id.* *Wisecarver* teaches a split sleeve ring 180 secured to the tapered ring 170. *Id.* *Wisecarver* teaches a fiber stop 190 secured to the split sleeve ring 180 and one or more bushings 150 and 160 secured within a second end of the longitudinal bore 140. *Id.* As described by *Wisecarver*:

[0016] ... The tapered ring 170 has an inner surface 172 and an outer surface 174 that is tapered. The inner surface 172 generally defines a cylindrical bore having a uniform diameter. The outer surface 174 generally defines a cylindrical solid having an increasing diameter going from the middle portion of the sub-assembly 100 to the back end 120 of the sub-assembly 100. The tapered ring 170 is generally press-fitted into the longitudinal bore 140 at the outer surface 174 such that the tapered outer surface 174 slidably engages the longitudinal bore 140 to

secure the tapered ring 170 inside the longitudinal bore 140. That is, the tapered ring 170 is held or secured against the inside portion of the housing 130 primarily by friction. ... The tapered ring 170 may be made from a non-heat treated material that is more ductile than the housing 130, such as copper or steel, for example. As will be made clear in the following paragraphs, the tapered ring 170 is configured to hold the split sleeve ring 180 and the fiber stop 190.

[0017] Press-fitted against the inner surface 172 of the tapered ring 170 is the split sleeve ring 180, which has an inner diameter surface 182 and an outer diameter surface 184. ... Once assembled into the sub-assembly 100, the outer diameter surface 184 is pressed against the inner surface 172 of the tapered ring 170. This configuration operates to hold the split sleeve ring 180 inside the tapered ring 170 primarily by friction.

(Emphasis added).

Thus, Wisecarver includes the tapered ring 170 for securing the split sleeve ring 180 within the longitudinal bore 140.

In direct contrast, independent claim 1 specifically recites:

1. A ferrule connector assembly comprising:
  - a housing having a first end, a second end, and a bore extending from said first end to said second end, said first end being adapted to receive a ferrule containing an optical fiber;
  - a split sleeve at least partially disposed within said bore at said second end and secured within said housing through a press fit engagement between an outer surface of said split sleeve and at least a portion of said bore; and
  - a core member at least partially disposed within said split sleeve, said core member having a hole optically aligned with the optical fiber.

(Emphasis added).

Also in direct contrast, independent claim 7 specifically recites:

7. A ferrule connector assembly comprising:
  - a split sleeve adapted to receive a core member, said core member having a longitudinal hole therethrough; and
  - a housing having a bore therethrough, said bore directly engaging an outer surface of said split sleeve, said housing having a first end adapted to receive said split sleeve and said core member and a second end adapted to receive a ferrule;
  - wherein said core member is inserted into said split sleeve and said split sleeve is then inserted into said first end of said housing, said split sleeve being held in place by a friction force.

(Emphasis added).

Also in direct contrast, independent claim 16 specifically recites:

16. A method for assembling a ferrule connector assembly comprising:  
a step for inserting a core member having a hole therein into a split sleeve to form a sleeve assembly; and  
a step for inserting said sleeve assembly into a housing, said housing having a bore extending from a first end of the housing to a second end of the housing, said first end adapted to receive a ferrule and said second end adapted to receive said sleeve assembly such that the bore directly engages an outer surface of the split sleeve in a press fit engagement.

(Emphasis added).

It is well established that for anticipation of a claim under 35 U.S.C. § 102, “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). The present invention does not require the tapered ring 170 for securing the split sleeve ring 180 within the longitudinal bore 140. In fact, the claims set forth that the bore directly engages the split sleeve.

The present invention includes several advantages over *Wisecarver* as discussed in the Applicant’s specification. For example, the ferrule connector assembly has only three parts. The split sleeve is a relatively inexpensive purchased part. The other two parts, the housing and the core member, are simple to make. Second, precise dimensional control is required only on the outer diameter of the core member, which then dictates the final inner diameter of the split sleeve in the assembled device. This precise dimension is formed through the simple process of centerless grinding. The finished assembly of the present invention is also held together by a single press fit. There is no tapered ring 170, which leads to a quicker, higher yielding assembly process. Due to the absence of the tapered ring 170, or other secondary methods of fixing the assembly, the ferrule connector assembly of the present invention is also more robust and reliable in operation. Since *Wisecarver* does not teach the apparatuses or method being claimed in this application, Applicants respectfully request that the rejection under 35 U.S.C. § 102(e) be withdrawn.

Claims 2-6, 11-15, 25 and 28 depend from one of independent claims 1, 7, and 16, and include all the elements of the independent claim from which they depend. The Applicants

respectfully request that the rejection of claims 2-6, 11-15, 25 and 28 under 35 U.S.C. § 102(e) be withdrawn at least for the reason that these claims depend from an allowable base claim.

The Examiner rejects claims 7-16 and 25 under 35 U.S.C. §102(b) as being anticipated by *Knodell* (United States Patent Application Number 5,971,626). Because *Knodell* does not teach or suggest each and every element of the rejected claims, Applicants respectfully traverse this rejection in view of the following remarks. Regarding the specific statements made in the outstanding office action on page 6, the Applicant assumes that *Knodell* is being referred to rather than *Wisecarver* as described in the introduction.

*Knodell* teaches an assembly 60 comprising a connector 64 that is received in one side of a connector sleeve 62. See Abstract and Figures 3-5. The connector 64 has a bayonet style protrusion 128 that is received in a bayonet cut-out 106 in the connector sleeve 62. *Id* (emphasis added). The other side of the connector sleeve 62 is configured to receive a standard connector design such as an SC connector or an ST type connector. *Id*. The connector has an enlarged gripping portion 132 for being gripped by fingers such that the connector 64 can be readily connected and disconnected from the connector sleeve 62 in tight spaces. *Id* (emphasis added).

In direct contrast, rejected independent claim 7 recites:

7. A ferrule connector assembly comprising:
  - a split sleeve adapted to receive a core member, said core member having a longitudinal hole therethrough; and
  - a housing having a bore therethrough, said bore directly engaging an outer surface of said split sleeve, said housing having a first end adapted to receive said split sleeve and said core member and a second end adapted to receive a ferrule;wherein said core member is inserted into said split sleeve and said split sleeve is then inserted into said first end of said housing, said split sleeve being held in place by a friction force.

(Emphasis added).

Also in direct contrast, rejected independent claim 16 recites:

16. A method for assembling a ferrule connector assembly comprising:
  - a step for inserting a core member having a hole therein into a split sleeve to form a sleeve assembly; and
  - a step for inserting said sleeve assembly into a housing, said housing having a bore extending from a first end of the housing to a second end of the housing, said first end adapted to receive a ferrule and said second end adapted to receive said sleeve assembly such that the bore directly engages an outer surface of the split sleeve in a press fit engagement.

(Emphasis added).

As described above, the present invention presents several advantages over the prior art. For example, *Knodell* requires a connector with a bayonet style protrusion that is received in a bayonet cut-out in the connector sleeve for affixing the connector 64 relative to the connector sleeve 62. Col. 5, ll. 4-7. The present invention does not require such engaging features as set forth in the claims. Since *Knodell* does not teach the apparatus as set forth in claim 7 nor the method set forth in claim 16, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) be withdrawn.

Claims 8-15 and 25 depend from either independent claim 7 or independent claim 16, and therefore include all the elements of the independent claim from which they depend. The Applicants respectfully request that the rejection of claims 8-15 and 25 under 35 U.S.C. § 102(b) be withdrawn at least for the reason that these claims depend from an allowable independent claim.

**B. Rejection Under 35 U.S.C. § 103**

The Examiner rejects claims 26 and 27 under 35 U.S.C. § 103(a) as being unpatentable over *Knodell* (U.S. Patent No. 5,971,626) in view of *Weiss et al.* (U.S. Patent No. 5,613,899).

Claims 26 and 27 depend from independent claim 16, and therefore include all the elements of independent claim 16. The Applicants respectfully request that the rejection of claims 26 and 27 under 35 U.S.C. § 103(a) be withdrawn at least for the reason that these claims depend from an allowable independent claim.

**CONCLUSION**

In view of the foregoing, [and consistent with the tentative agreement reached during the Examiner Interview,] Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 18th day of August, 2005.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David A. Jones", written in a cursive style.

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## APPENDIX

**Fig. 2**